

ABSTRACT

[0057] A rare earth garnet ceramic that may be used as a scintillator element is formed having accurate control of the rare-earth/alumina ratio, thereby increasing the transparency within the elements to a desired ratio. The ceramic is formed by milling together suitable sub-micron rare earth oxide powders and sub-micron alumina powders in a desired ratio. The milled powders are then made into a compact and sintered to form the rare earth garnet ceramic having the desired transparency.